

Conc H
3

3 (a) affixing a second layer of a magnetic medium to a first side of a first layer of a

4 semi-rigid substrate;

5 (b) affixing a third layer of protective material to said second layer such that said

6 protective material permits access to data on said magnetic medium of said second layer;

7 and

8 (c) storing and retrieving data from said magnetic medium of said second layer in

9 response to said personal computer rotating said card relative to said adapter to

10 manipulate said magnetic medium of said second layer.--

REMARKS

Claims 1, 2, 5, 7, 17, 18 and 19 have been amended.

Claims 10 - 16 and 20 - 30 have been withdrawn from consideration.

Claims 33 - 36 have been added.

Claims 1 - 9, 17 - 19, and 31 - 36 are present in the application.

Applicant appreciates the Examiner's diligence in Examining the subject application.

In the Office Action dated November 22, 1996, the Examiner has withdrawn claims 10 - 16 and 20 - 30 from further consideration as being drawn to a non-elected invention, has required a new title that is clearly indicative of the claimed invention, has requested that the abstract be revised to provide a concise statement of the disclosure and novel features of the invention, and has rejected claims 1 - 9, 17 - 19 and 31 - 32 under 35 U.S.C. §103.

Each of these issues is addressed below.

Initially, applicant recognizes the election of Group I claims 1 - 9, 17 - 19 for prosecution on the merits, and reserves the right to include the non-elected claims in a later filed divisional application. Further, the title of the subject application has been modified to clearly indicate the claimed invention in strict compliance with the Examiner's requirement. Similarly, the abstract has been revised to provide a concise statement of the disclosure and novel features of the invention in strict compliance with the Examiner's request.

The Examiner has rejected claims 1 - 9, 17 - 19 and 31 - 32 under 35 U.S.C. §103 as being unpatentable over Smith (U.S. Patent No. 5,107,099). This rejection is respectfully traversed. Briefly, the Smith patent (U.S. Patent No. 5,107,099) discloses a credit card sized memory card having a magnetic storage medium disposed on one side of the card. The magnetic storage medium is manipulable by read/write heads wherein the memory card is typically inserted, via a tray, into a cut-out portion of a rotatable disk contained within a disk drive system. The memory card is fixedly positioned within the rotatable disk wherein the disk rotates to transport the memory card past read/write heads for data transference. Alternatively, the memory card may be fixably positioned wherein read/write heads are manipulated over the memory card magnetic medium for data transference.

In contrast, the present invention is directed to a personal computer data storage card including a substrate layer, a magnetic medium layer, and a protective layer respectively affixed together. The data storage card is typically inserted within a personal computer floppy disk drive for data storage and retrieval, and may be of any shape. Further, the data storage card may include two layers of each of the magnetic medium and

protective layers for double sided operation wherein the storage capacity of the data storage card is substantially similar to that of a standard floppy disk. The data storage card is typically inserted into the floppy disk drive via an adapter and rotates within the floppy disk drive relative to the adapter and about an axis perpendicular to a surface of, and passing through, the data storage card. The rotation of the data storage card enables the magnetic medium layers to traverse floppy disk drive read/write heads for data transference. Accordingly, claims 1 and 17 have been amended to further define the invention by incorporating the feature of the data storage card rotating about an axis perpendicular to a surface of, and passing through, that card. The Smith patent (5,107,099) does not disclose, teach or suggest a data card rotating about an axis passing through the card. In fact, the Smith patent (5,107,099) discloses a data card fixedly positioned within a cut-out portion of a rotatable disk that rotates to transport the memory card past read/write heads. In other words, the card disclosed in the Smith patent (5,107,099) is fixedly positioned within the disk and cannot rotate about an axis passing through the card, but rather, is transported about, or revolves around, an axis passing through the rotatable disk. Further, claim 17 has been modified to incorporate the feature recited in claim 1 of the data storage card being inserted into a personal computer. The Smith patent (5,107,099) does not disclose, teach or suggest the utilization of the data card within any type of computer. Since the Smith patent does not disclose, teach or suggest a data card rotating about an axis passing through that card, or the utilization of the data card within a personal computer, claims 1 and 17 are considered to overcome the prior art.

Claims 2 - 4 are either directly or indirectly dependent upon claim 1 and include all the limitations of their parent claim. Therefore, claims 2 - 4 are considered to overcome the prior art for the same reasons discussed above in relation to claim 1, and for further limitations recited in claims 2 - 4. The Examiner takes the position that the claimed features of a 0.75 megabyte storage capacity recited in claim 2, and the use of paper as a semi-rigid substrate or protective layer recited in claims 3 - 4 are obvious features well within the state of the art. Further, the Examiner alleges that the claimed feature of a 0.75 megabyte storage capacity is not an unexpected or unobvious advance over the state of the art. The Smith patent (5,107,099) does not disclose, teach or suggest the features of utilizing paper as a substrate or protective layer for a data card, or data card storage capacity. Moreover, claim 2 has been amended to remove the term "approximately" and clearly define the storage capacity of the card. The data card storage capacity (e.g., 0.75 or 1.44 megabytes) advances the state of the art since data card storage devices typically have limited storage capacities substantially less than that of standard floppy disks. The data card of the present invention provides increased storage capacity (e.g., a double sided data card of the present invention includes a storage capacity substantially similar to that of standard floppy disks), thereby exceeding the capabilities of typical data card storage devices (i.e., see specification page 3, line 22). Since the Smith patent does not disclose, teach, or suggest the features of parent claim 1 described above, or the claimed features within claims 2 - 4 of the utilization of paper within the data card or a storage capacity for the data card, claims 2 - 4 are considered to overcome the prior art.

Claims 5 - 9, 18 and 19 are either directly or indirectly dependent from parent claims 1 and 17, respectively, and include all the limitations of their parent claims. Therefore,

claims 5 - 9, 18 and 19 are considered to overcome the prior art for the same reasons discussed above in relation to claims 1 and 17, and for further limitations recited in claims 5 - 9, 18 and 19. The Examiner takes the position that the claimed feature of utilizing both sides of a data card for double sided operation recited in claims 5 and 18 is obvious since magnetic disks, by way of example, are suitable for use on both major surfaces. However, the Smith patent (5,107,099) does not disclose, teach or suggest the use of both surfaces on the side of the data card. In fact, the Smith patent (5,107,099) discloses a magnetic medium disposed on only one surface of the data card. Further, the Smith patent (5,107,099) does not disclose, teach or suggest the features of utilizing paper having printed graphics as the protective material recited in claim 6, any storage capacity for the card recited in claims 7 and 19, or the utilization of paper as the protective layer recited in claim 9. Moreover, claims 7 and 19 have been amended to remove the term "approximately" and clearly define the storage capacity of the card. In addition, claim 19 has been further modified to clarify that the data card storage capacity relates to a quantity of data. Since the Smith patent does not disclose, teach or suggest the features of parent claims 1 and 17 described above, or the claimed features within claims 5 - 9, 18 and 19 of utilization of both sides of the data card, the data card storage capacity, and the utilization of paper with or without graphics as the data card protective layer, claims 5 - 9, 18 and 19 are considered to overcome the prior art.

Claims 31 and 32 are dependent upon claims 1 and 17, respectively, and include all the limitations of their parent claims. Therefore, claims 31 and 32 are considered to overcome the prior art for the same reasons discussed above in relation to claims 1 and

17, and for further limitations recited in claims 31 and 32. The Examiner takes the position that the claimed feature of the adapter recited in claims 31 and 32 is unpatentable over the tray disclosed in the Smith patent (5,107,099). However, claims 31 and 32 further recite the feature of an adapter for inserting the data card into a personal computer. The Smith patent (5,107,099) does not disclose, teach or suggest the insertion of the data card within any type of computer as described above. Since the Smith patent does not disclose, teach or suggest the features of parent claims 1 and 17 described above, or the claimed features within claims 31 and 32 of an adapter for inserting the data card into a personal computer, claims 31 and 32 are considered to overcome the prior art.

In addition to the foregoing, it would not be obvious to incorporate the various features cited by the Examiner as being well known in the prior art (e.g., the storage capacity of the data card, the utilization of both sides of the data card and the use of paper as the semi-rigid substrate and protective layer of the data card) into the Smith system to obtain the claimed invention. Specifically, the Smith patent (5,107,099) discloses a credit card sized memory card having a magnetic storage medium disposed on one side of the card for insertion into a specific apparatus having a rotatable disk. The rotatable disk includes a cut-out portion to receive the memory card and rotates in order to transport the memory card past read/write heads. Various features cited by the Examiner as being well known in the art (e.g., double sided operation, storage capacity and use of paper) relate to standard floppy or magnetic disks, or other types of cards typically not compatible with the Smith system. Since the Smith system includes a data card that does not utilize paper for a substrate or protective layer, and does not interface standard magnetic or floppy

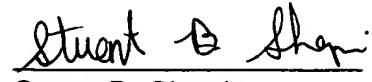
disks, the question arises as to why would anyone even think to incorporate the various features of the prior art relating to standard floppy or magnetic disks, and the utilization of paper into a system that does not interface floppy or magnetic disks, and does not interface cards including paper. The answer is that there is no reason for doing so, other than hindsight derived from applicant's own disclosure. Accordingly, the proposed combination of prior art features with the Smith patent is clearly not obvious, and claims 1 - 9, 17 - 19, 31 and 32 are considered to overcome the prior art.

New claims 33 and 34 are dependent upon claims 1 and 17, respectively, and include all the limitations of their parent claims. Claims 33 and 34 include the additional feature of directly inserting a data card into a personal computer having a drive adapted to accommodate the data card. Claims 33 and 34 are considered to overcome the prior art for the same reasons discussed above in relation to claims 1 and 17, and for further limitations recited in claims 33 and 34.

New claims 35 and 36 are similar to claims 1 and 17, respectively, except that claims 35 and 36 include the feature of the data card being inserted into an adapter for placement in a personal computer wherein the personal computer rotates the data card relative to the adapter for manipulation of the magnetic medium. Since the Smith patent does not disclose, teach or suggest the features of rotating the data card relative to an adapter, or the utilization of the data card within a personal computer, claims 35 and 36 are considered to overcome the prior art.

The application, having been amended to overcome issues raised in the Office Action, is considered to be in condition for allowance and a Notice of Allowance is earnestly solicited.

Respectfully submitted,


Stuart B. Shapiro
Registration No. 40,169

EPSTEIN, EDELL & RETZER
1901 Research Boulevard, Suite 400
Rockville, Maryland 20850-3164
(301) 424-3640

Hand Carried: 2/24/97